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IEEE						
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	an Environments for V	Wireless Applic	opagation, Vol. 46, No. 8, August 1 ations" Leonard Piazzi and Henry	998. " Effect of L. Bertoni	Terrrain on I	ath Loss in
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T.2.	1	4,675,147	6-23-87	Schaefer et al.			4-6-83
_	2	4,736,453	4-5-88	Schloemer			12-10-85
	3	4,885,694	12-5-89	Pray et al.	1		4-29-87
	4	5,111,392	5-5-92	Malin	10	<u>~</u>	6-9-89
	5	5,119,307	6-2-92	Blaha et al.	1		12-22-89
	6	5,239,487	8-24-93	Horejsi et al.		1	
1	7	5,293,640	3-8-94	Gunmar et al.	·		10-24-90
8	,	5,307,261	4-26-94	Maki et al			(20 0
9	,	5,337,149	8-9-94	Kozah et al	RECEIVE		6-28-91
1	0	5,339,184	8-16-94	Tang	IUN 1 1 200	3 —	11-12-92
T.Z.	1	5,375,123	12-20-94	Techi	nology Center	2600	6-15-92
	L		12-20-94	Andersson et al.			2-5-93
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Applicant(s)

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INFORMATION DISCLOSURE

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Patent and Trademark Office * U.S. DEPARTMENT OF COMMERCE

02560028A INFORMATION DISCLOSURE 09/628,506 Applicant(s) (Use several sheets if necessar) JUN 1 0 2003 T. Rappaport et al. Filing Date Group Art Unit 7/28/00 ENT & TRADE U.S. PATENT DOCUMENTS EXAMINER DOCUMENT NUMBER DATE NAME INITIAL CLASS SUBCLASS FILING DATE IF APPROPRIATE 23 5,539,665 7-23-96 Lamming et al. 7-25-94 5,553,312 9-3-96 Gattey et al. 6-20-94 25 5,553,620 9-10-96 Snider et al. 5-2-95 26 5.555,354 9-10-96 Strasnick et al. 3-23-93 27 5,561,841 10-1-96 Markus 28 5,564,070 10-8-96 Want et al. 7-30-93 29 5,594,946 1-14-97 Menich et al. 2-28-95 30 5,598,532 JUN 1 - 1 2003 1-28-97 Liron 10-21-93 31 Technology Center 2600 5,625,827 4-29-97 Krause et al. 12-23-94 5,636,344 6-3-97 Lewis 8-22-91 33 5,689,355 11-18-97 Okubo et al. 7-1-96 FOREIGN PATENT DOCUMENTS REF DOCUMENT NUMBER DATE COUNTRY CLASS SUBCLASS YES NO OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

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T.Z.	 		6-2-98	Urbish et al.			5-8-97	
	35	5,794,128	8-11-98	Brockel et al.			9-20-95	
_	36	5,799,154	8-25-98	Kuriyan			6-27-96	
	37	5,809,282	8-15-98	Cooper et al	-	-	6-7-95	
	38	5,815,395	9-29-98	Hart et al.			6-29-95	
	39	5,828,960	10-27-98	Tang et al.			3-31-95	
	40	5,831,610	11-3-98	Tonelli et al.	-		2-23-96	
	41	5,832,389	11-3-98	Dent RE	PEIVE		4-3-96	
	42	5,861,887	1-19-99	Butler et al.	- 2 6000	_	12-5-95	
	43	5,867,112	2-2-99	Kost Technolog	y Center 2	600 _	5-14-91	
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Patent and Trademark Office * U.S. DEPARTMENT OF COMMERCE

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	68	6,061,722	5-9-00	Lipa et	al.				12-23-9	96
	69	6,075,541	6-13-00	Maclino	vsky			5	11-7-97	7
	70	6,088,522	7-11-00	Lee et a			-		7-31-97	7
	71	6,104,699	8-15-00	Holende	r et al.	· · · · · · · · · · · · · · · · · · ·				
	72	6,108,309	8-22-00	Cohoe et	al.				12-8-97	
	73	6,111,857	8-29-00	Soliman	et al.	RI	ECEIVE	D —	9-11-97	
	74	6,122,083	9-19-00	Ohta et a	al.		JN 1-1-20		10-3-94	
	75	6,148,010	11-14-00	Sutton et	al.		ology Cente		6-24-98	
	76	6,199,032	3-6-01	Anderson				7-22-98		
1.2.	77 6,204,813 3		3-20-01	Wadell e	t al.				2-20-98	
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	79	6,229,540	5-8-01	Tonelli	et al.			10-13-98	
	80	6,253,086	6-26-01	Paranta	inen et al.			3-25-99	,
	81	6,285,377	9-4-01	Greenba	num et al.			6-26-97	
	82	6,289,203	9-11-01	Smith et	al.		· · · · · · · · · · · · · · · · · · ·	2-25-98	
	83	6,317,599	11-13-01	Rappapo	ort et al.			5-26-99	
	84	6,326,987	12-4-01	Alexand	er			12-19-00	
	35	6,330,005	12-11-01	Tonelli e		RECEIVE		10-6-99	
8	16	6,311,144	10-30-01	Abu El A	Ata	JUN 1 1 200		7-31-98	
8	7	6,337,688	1-8-02	Berstis	Tec	hnology Center	2600 —	1-29-99	
[2. s	. 88 6,338,031 1-8-0		1-8-02	Lee et al.				9-23-99	
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<u> 73.</u>	-		7-4-00	Djoko et al.			12-31-97
	101	5,710,758	1-20-98	Soliman et al.			
	102	5,821,937	10-13-98	Tonelli et al.			9-29-95
	103	5,774,669	6-30-98	George et al.			
	104	5,802,146	9-1-98	Dulman			7-28-95
	105	5,825,759	10-20-98	Liu	ECEIVE		11-22-95
	06	5,845,124	12-1-98	Berman	JN 1 1 20 03		7-24-95
1	09	6,199,032	3-6-01	Anderson	ology Center 2	600	5-1-96
1	10	5,467,441	11-14-95				7-22-98
11	1	6,243,772	6-5-01	Stone et al.			10-6-94
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•		P. Bahl, V. Padmana Lessons, "Microsoft	bhan, and A. Balachandra Technical Report, April 2	in, "A Software System for Locatin	g Mobile Users: Design, Evaluation, at
T.Z.	1				b / wantelon, al
	2	G. Durgin, T.S. Rapp Homes and Trees at	paport, H. Xu, Measureme 5.85 GHz," IEEE Transac	nts and Models for Radio Path Los: tions on Communications, vol. 46, n	s and Penetration Loss in and Around to. 11, November 1998.
	3	C.M. Peter Ho et al., Wide-Band Propagat Information Network	"Antenna Effects on Indo ion Model for In-Building s, Vol. 1, No. 1, 1994.	or Obstructed Wireless Channels a Personal Communications Systems	nd a Deterministic Image-Based ,'' International Journal of Wireless
	4	S. Kim et al., "Radio Environments at 908	Propagation Measuremen MHZ and 1.9 GHz," IEEI	ts and Predictions Using Three-dim Transactions on Vehicular Techno	nensional Ray Tracing in Urban Dlogy, vol. 48, no. 3, May 1999
	5	T.S., Rappaport et al. Satellite Coverage for MPRG-TR-95-14, Vir	, "Use of Topographic Ma Radio Detection and Trac ginia Tech, September 199	ps with Building Information to Do king in Urban Environments," MP 5	etermine Antenna Placements and GP: RG Technical Report RECEIVED
-		R.K. Morrow, Jr. and	T.S. Rappaport, "Getting	In," Wireless Review Magazine, M	
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					Technology Center 26
	7	pp.5-148 to 5-156, 199	nunications, Inc., "SitePla 9.	nner 3.16 for Windows 95/98/NT Us	ser's Manual," Software User's Manua
	8	M. Panjwani et al., "I Environments," IEEE	nteractive Computation of Journal on Selected Areas	Coverage Regions for Wireless Cor in Communications, Vol. 14, No. 3.	nmunication in Multifloored tadoor April 1996.
	y	L Piazzi and H.L. Bert Transactions on Vehic	oni, "Achievable Acurrac ular Technology, vol. 48, n	of Site-Specific Path-Loss Predict 0. 3, May 1999.	ions in Residential Enviroments" IEE
	10	T.S. Rappaport et al., 'Magazine, May 2002.	Wireless Communication	s: Past Events and a Future Perspe	ctive", IEEE Communications
	11	T.S. Rappaport et al., Embedded Wireless M 1994.	'Radio Propagation Prediction of the Rediction of the Red	tion Techniques and Computer-Aid al Report, MPRG Technical Repor	ded Channeling Modeling for t MPRG-TR-94-12, Virginia Tech, Ju
7.	12	T.S., Rappaport et al., Detection and Tracking 1995	"Use of Topographic Map in Urban Environments,"	s with Building Information to Deto MPRG Technical Report MPRG-	ermine Antenna Placements for Radio TR-95-14,Virginia Tech, November
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1,7	2, 1				
ı		T.S. Rappapoprt, "wireless	Communications: P	rinciples and Practice" Second Ed	ition. Prentice Hall 2000
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		T.S. Rappaport et al., "Usc	of Tonographic Man	se with D. (1):	
	15	Satellite Coverage for Radio Virginia Tech, September 19	Detection and Track 195.	os with building Information to De king in Urban Environments," MP	termine AntennaPlacements and GP RG Technical Report MPRG-TR-95
		T.S. Rappaport et al., "Indoo produced for Motorola, Dece	or Path Loss Measur ember 16, 1997.	ement for Homes and Apartments	at 2.4 and 5.85 GHz," private report
	16				RECEIVED
		T.S. Rappaport, "Isolating Ir	nterference," Wirele	ss Review Magazine, May 2000.	JUN 1 1 2003
	17				-
	· · · · · · · · · · · · · · · · · · ·	Slides from T.S. Rappaport a	nd R. Skidmore, "In	troduction to In-Building Wireless bruary 4, 2003.	Technology Center 2600
	18	Wireless Solutions Conference	e and Exposition, Fe	bruary 4, 2003.	Systems, "Infocust In-Building
		S. Sandhu, M.P. Koushik, and	T.S. Rappaport "Pr	edicted Path Loss for Roslow VV	irst set of predictions for ORD Proje
	114	opecate Propagation F	rediction," MPRG?	edicted Path Loss for Roslyn VA, F Technical Report MPRG-TR-94-20	rist set of predictions for ORD Proje I, Virginia Tech, December 1994.
		S. Sandhu, M.P. Koushik, and Project on Site Specific Propa	T.S. Rappuport, "P gation Prediction." M	redicted Path Loss for Roslyn VA.	First set of predictions for ORD R-94-20. Virginia Tech, March 1995
	39	:		A continue to hote wie Ket- (R-94-20. Virginia Tech, March 1995
		S. Seidel et al., "Site-Specific I Transactions on Vehicular Tec	Propagation Prediction	on for Wireless In-Building Person	nal Communication Design, TEEF
	21		- 10. 45, 1to.	4, (tovember 1994,	
		S. Shakkottai and T.S. Rappap Fifth International Symposium	ort, " Research Chal	llenges in Wireless Networks: A Te I Multimedia Communications, Ho	echnical Overview," Proceeding of th
	22		2 01300	According Communications, Ho	nolulu, HI, October 2002.
		H. Sherali et al., "On the Optin	nal Location of Tran	smitters for Micro-cellular Radio 5, Vol. Vol. 14, No. 3, pp. 662-673	
	23	outhar on Selected Area	s in Communications	smitters for Micro-cellular Radio s, Vol. Vol. 14, No. 3, pp. 662-673,	Communication System Design," May 1996.
	-	R, Skidmorre et al. "A Compre	hansiya In Duil I		
5	24	Bradley Department of Electric Master's Thesis - un	al Engincering, MPF opublished by	and Microcellular Wireless Comm RG-TR-97-13, June 1997. Virginia Tech for 2 ye	nunication System Design Tool" The
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Ti2.	R. Skidmore, et al., Russ "Project Update," AoC o	sell Senate Office Building Contract # Acbr96088, pr	g Propagation Study, Project R epared for Office of the Archit	eport for Joseph R. Loring & Associates ect of the Capital, January 19, 1997.
T.Z.	R. Skidmore, et al., Rus. "Assessment and Study of Office Building (RSOB) of the Capitol, February	sell Senate Office Building of the Proposed Enhancen and Associated Utility Tu 20, 1997.	g Propagation Study, Project R nents of the Wireless Communi nnels," AoC Contract # Acbr9	Report for Joseph R. Loring & Associates cations Environment of the Russell Sena 6088, prepared for Office of the Archite
T.b.			·	/ireless Systems in Enclosed Spaces,"
Tet.	R. Skidmore et al., " Inte Multi-Floored Indoor En	ractive Coverage Region a vironments: SMT Plus <i>tm</i>	and System Design Simulation , " IEEE ICUPC Proceedings,	for Wireless Communication Systems in 1996.
T.2.		et al., "Radio Pro odeling for Embedo Virginia Tech, Jui		Techniques and Computer- stems," MPRG Tech. Report
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	Company Web Page "Actix" www.actix.com product name: E-NOS (now E-AMS)	
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	Company Web Page " Agilent' www.agilent.com product name: OPAS32	
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	Company Web Page " Agilent " www.agilent.com product name: Wizard	
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	Company Web Page " ComOpt" www. comopt.com. product name: CellOpt AFP	DEODU
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